

## AFFIDAVIT OF ACCURACY



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REPUBLICS

(19) **SU** <sup>(11)</sup> **1071297** **A**

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USSR STATE COMMITTEE  
ON INVENTIONS AND DISCOVERIES

13 [illegible 13  
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**DESCRIPTION OF INVENTION**  
**APPENDIX TO INVENTOR'S CERTIFICATE**

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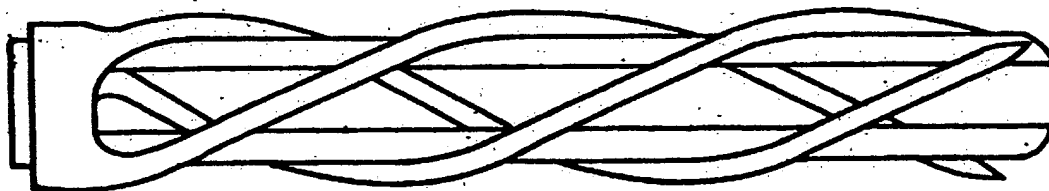
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(53) 615.472:611.728(088.8)

(56) 1. USSR Inventor's Certificate No. 915844,  
K1 A 61 B 17/18, 1982

(54) (57) OSTEOSYNTHESIS DEVICE contains a slotted head, and spiral shaped durable rods. Its distinctiveness lays in the following: in order to secure a safe and constantly intensive osteosynthesis by creating pressure to the bone tissue, to simplify the design of the device and lower its mass, the device is equipped with a U-shaped elastic flat spring with separated forceps that are mounted inside the spiral shaped rods.



*Фиг. 1*

**Fig. 1**

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The invention is in the field of medical technology; namely, it deals with osteosynthesis devices. It may be used in the treatment of cervical hip fractures.

There is a known device with a slot and spiral shaped durable rods, which has one located inside of the other, and with one of the rods connected to the head, and the other mounted to the head with a nut [1].

However, this structure does not provide elastic pressure to the bone tissue; it has a complex configuration, and a relatively large mass, which decreases the effectiveness of fixation and the treatment of a fracture.

The goal of the invention is to provide a safe, constant, and intensive osteosynthesis by creating pressure on the bone tissue through simplification of design of the device, and decreasing its mass.

The mentioned goal is reached in the following manner: the osteosynthesis device, which contains a slotted head and spiral shaped elastic rods, has a U-shaped, elastic, flat spring with separated forceps mounted inside the spiral shaped rods.

Fig. 1 shows osteosynthesis device; Fig. 2 - the head with spiral shaped rods; Fig. 3 - the flat spring; Fig. 4 - A-A Section on Fig.2

The device contains a head (1) with a long slot (2) on its face plane (Fig.4), and three durable and elastic, spiral shaped and curved round rods: (3-5).

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In addition, the device consists of a U-shaped spiral (6), separated into sides forceps (7) and (8), and tips (9) and (10) which are rounded on the outside.

The device is used as follows: After reposition of cervical hip fracture in the subtrochanteric region, an opening with a diameter equal to the diameter of the head 1 of the device is trepanned. Under an X-Ray Control, in a closed environment, the device is mounted in the neck and head of the hip. Upon entering the bone tissue, the device, owing to its spiral shaped round rods (3)-(5), rotates around its own axes. Then, the preliminary pressed together tips (9) and (10) of forceps (7) and (8) of the U-shaped spiral (6) are inserted into the long slot (2) of the device's head (1). After full insertion of spiral (6) into the device, its forceps (7) and (8), reaching its original state, exert from within elastic pressure to the spiral shaped round rods that, in their turn, exert constant intensive pressure on the bone tissue, with the maximum pressure on the head of the hip.

As a result, the safety of osteosynthesis increases throughout the entire process of treatment.

Thus, the offered device ensures a safe, permanent and intensive osteosynthesis of

cervical hip fracture by creating a flexible pressure to the bone tissue throughout the entire process of treatment. Further, the structure of the device is simpler and its mass less.

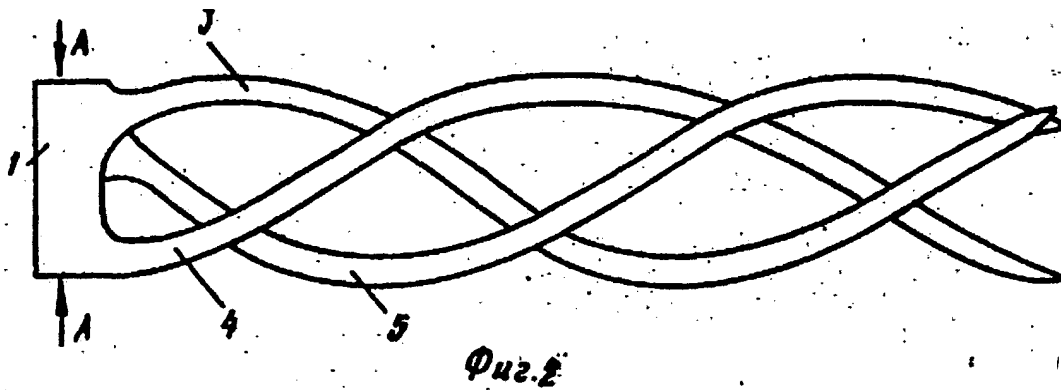
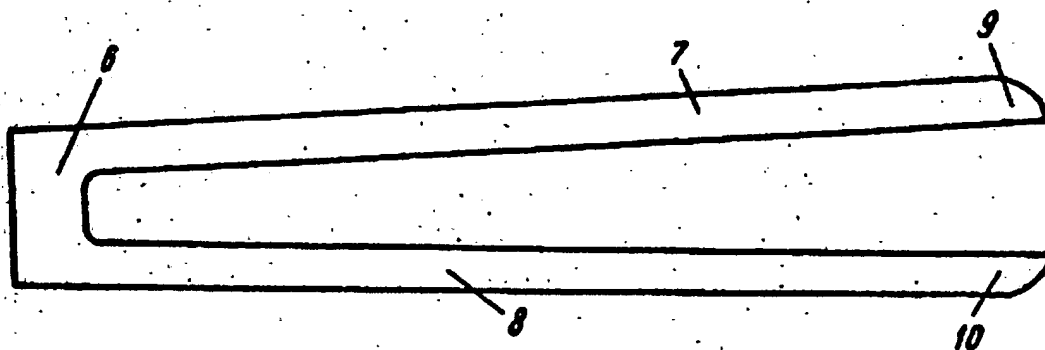
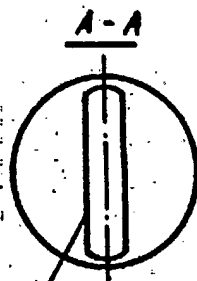


Fig. 2



Фиг. 3

Fig. 3



2 Фиг. 4

Fig. 4